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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,827	07/06/2001	Barry H. Schwab	VID-02202/29	8990

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EXAMINER	
ORGAD, EDAN	
ART UNIT	**PAPER NUMBER**
2684	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/900,827	SCHWAB ET AL.	
	Examiner	Art Unit	
	Edan Orgad	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *3-5,7,8 and 15* is/are allowed.

6)☐ Claim(s) *1,2,6,12-14 and 16-24* is/are rejected.

7)☒ Claim(s) *9-11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, filed 10/31/05, with respect to claims 1, 2, 6, 12-14 and 16-24 have been fully considered and are persuasive.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 6, 12-14, and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (6,597,669) in view of Brown et al (6,157,621) and further in view of Wright et al. (6,512,749).

Consider claim 1, Takahashi discloses a downstream adaptive modulation system (see col. 1 lines 8-15, col. 3 lines 65-67, and col. 4 lines 1-33). Takahashi discloses a wireless access termination system (see col. 3 lines 65-67 and col. 1-45, where Takahashi is discussing a processing system for the uplink and downlink of a Asynchronous Transfer Mode (ATM) satellite network). Takahashi discloses one or more wireless modems (see col. 5 lines 18-31, where Takahashi is discussing a sending transmit cells to particular beams, thus, wireless modems). Takahashi discloses said wireless access termination system including a plurality of queues and a parser for parsing a data stream onto said plurality of queues (see col. 4 lines 6-67). Takahashi discloses each of said queues having a different coding, wherein said one or more

wireless modems receives said data stream from said plurality of queues (see col. 3 lines 15-40, col. 4 lines 6-67, col. 5 lines 18-65, and col. 7 lines 9-65). Takashi does not specifically disclose using different coding but fails to specifically disclose using different coding and different modulation schemes. In related art, Brown discloses satellites are capable of transporting calls to millions of customers using portable, mobile and fixed residential and business terminals, and gateways to public phone networks. The constellation uses the 20 and 30 GHz frequency bands for communications between Earth and the constellation, and the 60 GHz band for communicating among the satellites where different coding and modulation schemes are utilized (see Brown, col. 35, line 51- col. 26, line 19, col. 72, lines 5-27 and Table 1 and Tables 4-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use different coding and different modulation schemes as discussed in Brown with Takahashi already existing teaching of different coding schemes in order to provide more efficient means of data and video service to customers across the globe.

Furthermore, Takahashi does not specifically disclose based on its ability to demodulate and decode the signals in said plurality of queues. Wright teaches based on its ability to demodulate and decode the signals in said plurality of queues (see col. 5 lines 15-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Takahashi, and have the system based on its ability to demodulate and decode the signals in said plurality of queues, as taught by Wright, thus allowing many user to be concurrently serviced by the system, as discussed by Wright (col. 1 lines 10-25).

Consider claim 6 and 16, Takahashi discloses an adaptive modulation system (see col. 3 lines 15-40, col. 4 lines 5-35). Takahashi discloses a wireless access termination system (see col. 3 lines 65-67 and col. 1-45, where Takahashi is discussing a processing system for the uplink and downlink of a Asynchronous Transfer Mode (ATM) satellite network). Takahashi discloses a plurality of wireless modems, each of said wireless modems a transceiver for receiving a data channel from said WATS containing a plurality of sub channels (see col. 6 lines 4-25). Takahashi discloses a splitter to split the power level of said data channel n-ways; and a plurality of queues; wherein n is equal to the number of queues in said plurality of queues, wherein each of said queues is associated with a different FEC coding rate (see col. 5 lines 18-67). Takahashi discloses each of wireless modems receives data from said plurality of queues (see col. 5 lines 18-67 and col. 6 lines 1-67 and col. 7 lines 38-55).

Takashi does not specifically disclose using different coding but fails to specifically disclose using different coding and different modulation schemes. In related art, Brown discloses satellites are capable of transporting calls to millions of customers using portable, mobile and fixed residential and business terminals, and gateways to public phone networks. The constellation uses the 20 and 30 GHz frequency bands for communications between Earth and the constellation, and the 60 GHz band for communicating among the satellites where different coding and modulation schemes are utilized (see Brown, col. 35, line 51- col. 26, line 19, col. 72, lines 5-27 and Table 1 and Tables 4-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use different coding and different modulation schemes as discussed in Brown with Takahashi already existing teaching of different

coding schemes in order to provide more efficient means of data and video service to customers across the globe.

Takahashi does not specifically disclose based on its ability to demodulate and decode the signals in said plurality of queues. Wright teaches based on its ability to demodulate and decode the signals in said plurality of queues (see col. 5 lines 15-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Takahashi, and have the system based on its ability to demodulate and decode the signals in said plurality of queues, as taught by Wright, thus allowing many user to be concurrently serviced by the system, as discussed by Wright (col. 1 lines 10-25).

Consider claim 12, Takahashi discloses a method for providing downstream adaptive modulation inherently usable in a broadband terrestrial fixed wireless (see col. 1 lines 7-15 and col. 3 lines 15-31, where Takahashi is discussing wireless Asynchronous transfer mode transmission and reception by fixed or mobile ground stations with nothing specific in the transmission that would not let if be used in terrestrial systems). Takahashi discloses periodically receiving signal quality of service metrics from wireless modems (see col. 4 lines 15-30). Takahashi discloses receiving a data stream and a rule for parsing the data stream into a plurality of queues for individual wireless modems, wherein each queue has a different coding (see col. 46-67 and col. 5 lines 18-41). Takahashi discloses encoding the parsed data in each queue according to the associated modulation scheme for the queue (see col. 5 lines 18-67, and col. 7 lines 37-55).

Takashi does not specifically disclose using different coding but fails to specifically disclose using different coding and different modulation schemes. In related art, Brown discloses satellites are capable of transporting calls to millions of customers using portable, mobile and fixed residential and business terminals, and gateways to public phone networks. The constellation uses the 20 and 30 GHz frequency bands for communications between Earth and the constellation, and the 60 GHz band for communicating among the satellites where different coding and modulation schemes are utilized (see Brown, col. 35, line 51- col. 26, line 19, col. 72, lines 5-27 and Table 1 and Tables 4-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use different coding and different modulation schemes as discussed in Brown with Takahashi already existing teaching of different coding schemes in order to provide more efficient means of data and video service to customers across the globe.

Takahashi discloses combining the encoded parsed data from each queue according to frequency; and transmitting the combined data to the wireless modems (see col. 7 lines 9-67).

Takahashi does not specifically disclose periodically receiving signal health metrics from wireless modems. Wright teaches periodically receiving signal health metrics from wireless modems (see col. 5 lines 4-67 where Wright is discussing the standard FEC, coding and management of user terminals that report back to a network operations center).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Takahashi, and have the system periodically receiving signal health metrics from wireless modems, as taught by Wright, thus allowing many user to be concurrently serviced by the system, as discussed by Wright (col. 1 lines 10-25).

Consider claims 2, 13, 14, 17, and 18-24, Takashi discloses an encoder and modulator for encoding and modulating the parsed data in each of said queues according to a modulation order and set of coding parameters, wherein said modulation order and set of coding parameters are different for each of said queues (see col. 5 lines 13-35). Takahashi does not specifically disclose Forward error correction. Wright teaches forward error correction (see col. 5 lines 15-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Takahashi, and have forward error correction, as taught by Wright, thus allowing many user to be concurrently serviced by the system, as discussed by Wright (col. 1 lines 10-25).

Allowable Subject Matter

Claims 3-5, 7-8, and 15 are allowed.

Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edan Orgad whose telephone number is 571-272-7884. The examiner can normally be reached on 8:00AM to 5:30PM with every other Friday off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EDAN ORGAD
PATENT EXAMINER/TELECOMM.
E.O. 11/28/07